

REMARKS

Applicant respectfully requests consideration of the subject application as amended herein. This Amendment is submitted in response to an Office Action mailed on August 28, 2003. Claims 1-30 are rejected. Claims 1, 2, 6-8, 10, 15, 17, 18, 20-22, 24, 25, 29 and 30 have been amended. Claims 5, 9, 16, 19 and 28 have been cancelled without prejudice. No new matter has been added.

The Examiner rejected claims 8-11 and 15 under 35 U.S.C. § 102(b) as being anticipated by Huang, et al., ("Exploiting Basic Block Value Locality with Block Reuse," hereinafter "Huang"). Claims 1-3, 5, 13-14, 18-20, 22-23, 24-26 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang. Claims 4, 6-7, 12, 16-17, 21, 27 and 29-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Kulkarni, et al., (U.S. Patent No. 5,742,805, hereinafter "Kulkarni"). As discussed below, the pending claims are patentable over the above reference.

Huang discloses a mechanism that records input and live output values of basic blocks to provide value prediction and reuse at the basic block level. Contrary to the presently claimed invention, Huang does not teach or suggest searching a buffer that stores instances of the reuse region for a valid matching instance that has data input matching the current data input and that cannot be potentially invalidated, and then, if a valid matching instance is not found, predicting live-out registers and corresponding output values using reuse region information stored in the buffer. Accordingly, Huang lacks the features that are included in the following language of claim 1:

...searching a buffer storing a plurality of instances of the reuse region for a valid matching instance that has a matching data input and cannot be potentially invalidated; and

if the valid matching instance is not found, predicting, for the reuse region, a current set of live-out registers and an output value for each live-out register in the set

using reuse region instance information in the buffer.

Similar language is also included in independent claims 8, 18 and 24. Thus, claims 1, 8, 18 and 24 and their corresponding dependent claims are patentable over Huang.

Kulkarni does not help Huang to render the presently claimed invention unpatentable. Similarly to Huang, Kulkarni does not teach or suggest searching a buffer that stores instances of the reuse region for a valid matching instance that has data input matching the current data input and that cannot be potentially invalidated, and then, if a valid matching instance is not found, predicting live-out registers and corresponding output values using reuse region information stored in the buffer. Accordingly, Kulkarni lacks the same features that are missing from Huang.

Thus, the present invention as claimed in independent claims 1, 8, 18 and 24 and their corresponding dependent claims is patentable over the cited prior art references.

Therefore, Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §§102(b) and 103(a). Applicants furthermore submit that all pending claims are in condition for allowance, which action is earnestly solicited.

Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Marina Portnova at (408) 720-8300.

Respectfully submitted,

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